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09/677,901	10/03/2000	Wanrong Lin	MATI-195US	4651
23122	7590	04/06/2004	EXAMINER	
RATNERPRESTIA			REKSTAD, ERICK J	
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2613

DATE MAILED: 04/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/677,901

Applicant(s)

LIN ET AL.

Examiner

Erick Rekstad

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-8 and 11-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7,8,12 and 13 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,11 and 14-16 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This Office Action is in response to Applicant's Response dated February 20, 2004.

#### ***Response to Amendment***

In regards to applicants' response to the rejection of claims 1 and 11 under 35 U.S.C. § 102(e) as being anticipated by Chen et al. The applicants state that Chen, at column 7 line 30 through column 11 line 44, requires the coefficients for the blocks be arranged in 8x8 matrices and therefore must run-length decode any run-length encoded values. Chen specifically states that the transcoder does not run-length decode or run-length encoded the video stream (Col 7 Lines 14-16). Further, the blocks are arranged in 8x8 matrices in order to convert the DV stream to a MPEG-2 stream, as the 8x8 DCT is common to both formats (Col 6 Lines 27-44). The sections column 7 line 30 through column 11 line 44, cited by the applicant, show the required steps to convert the different DV DCT formats to a general format for conversion to MPEG-2 DCT format (Col 2 Lines 10-16, Col 7 Lines 23-29). Chen further teaches the prior art run-length decoding the DV stream (402, Fig. 4) but that the system of Chen does not run-length decode or encode (Col 7 Lines 13-17). Therefore the run-length data must be contained in the DCT. The applicants response and amendment to claim 1 has not overcome the rejection of claim 1 and 11 under 35 U.S.C. § 102(e) as being anticipated by Chen et al.

In regards to applicants' response to the rejection of claim 2 under 35 U.S.C. § 103(a) as being obvious in view of Chen et al and Potu. The applicants state that the rejection for claim 2 is overcome by the amended claim 1. As shown above, the

amendment to claim 1 has not overcome the 102(e) rejection and therefore the rejection of claim 2 is not overcome.

In regards to applicants' response to the rejection of claims 4 and 5 under 35 U.S.C. § 103(a) as being obvious in view of Chen et al, Potu, and Linzer et al. The applicants state that the rejection for claims 4 and 5 are overcome by the amended claim 1. As shown above, the amendment to claim 1 has not overcome the 102(e) rejection and therefore the rejection of claims 4 and 5 are not overcome.

In regards to applicants' response to the rejection of claim 14 under 35 U.S.C § 103(a) as being obvious in view of Chen et al and Tsuboi et al. The applicants state that neither Tsuboi or Chen teach the zeroing of coefficients. Tsuboi teaches the canceling of data beyond a target data quantity in order to store video data on a record medium such as a magnetic tape (Col 1 Lines 13-22, Col 2 Lines 65-67, Col 3 Lines 1-22, Col 10 Line 67, Col 11 Lines 1-5). It is well known in the art to cancel a set of bits by setting the bits to NULL (zero). Chen and Tsuboi therefore satisfy the requirements of claim 14.

### ***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6,618,442 to Chen et al.

[claims 1 and 11]

Chen teaches the method and system for transcoding a first encoded video signal that has been compressed using a discrete cosine transform (DCT) operation in a first video format into a second encoded video signal that is compressed using a DCT operation in a second video format, different from the first video format, the method comprising:

Decoding the first encoded video signal to obtain a stream of DCT coefficient blocks in the first format (602 in Figure 6);

Reformatting the DCT coefficient blocks obtained from the first encoded video signal into DCT coefficient blocks for the second format (604 in Figure 6);

Encoding the second-format DCT coefficient blocks to obtain the second encoded video signal (606 in Figure 6)(Col 6 Lines 45-67, Col 7 Lines 1-12, Figs. 3 and 6). Chen further teaches the prior art run-length decoding the DV stream (402, Fig. 4) but that the system of Chen does not run-length decode or encode (Col 7 Lines 13-17). Therefore the run-length data must be contained in the DCT.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of US Patent 6,219,457 to Potu.

[claim 2]

Chen teaches the method of transcoding a DV stream to an MPEG stream by partially decoding a DV stream by reducing the stream to DCT blocks as required by claim 1. Chen does not teach the use of ordering the DCT coefficient blocks based on a zigzag scan. Potu teaches the method of ordering the DCT coefficient blocks based on a zigzag sequence (Col 5 Lines 31-42, Fig 3). Potu also teaches that the zigzag ordering can precede or follow quantization. It would be obvious to one skilled in the art at the time of the invention to perform a zig-zag ordering of DCT coefficients before the quantization step so that in the transcoding process of claim 1 the zigzag ordering is preserved.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen and Potu in further view of US Patent 6,141,447 to Linzer et al.

[claim 4]

Chen teaches the method of transcoding a DV stream to a MPEG stream as required by claim 1. Chen does not teach how the quantization steps are performed. Potu teaches the use of a quantization table for use in a dequantization step and a quantization matrix for quantization step (Col 5 Lines 25-30, Col 6 Lines 64-67, Fig 1). Potu does not teach using information from the dequantization table to adjust the quantization matrix. Linzer teaches the use of a auxiliary information line used to supply the quantization scales from the video decoder to the video encoder in order to reduce the cost and complexity of the transcoder (Col 5 Lines 12-26, Fig 5). It would be obvious to one skilled in the art at the time of the invention to combine the method of Chen, Potu and Linzer in order to reduce the cost and complexity of a transcoder.

[claim 5]

It is well known in the art that the respective factors used to generate respective quantized DCT coefficients are powers of two and the use of shifting a value to multiply or divide by two (official notice). It would be obvious to one skilled in the art at the time of the invention to use coefficients of powers of two to generate respective quantized DCT coefficients in order to replace costly multiplication operations with shifting operations.

Claims 14, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of US Patent 5,550,640 to Tsuboi et al.

[claims 14,15, and 16]

Chen teaches the method of converting a DV stream to a MPEG stream. Chen does not teach the method with fixed length blocks. Tsuboi teaches the method of encoding a digital stream using fixed length block sizes and the decoding of the stream ( Col 8 Lines 60-67, Col 9 Lines 1-24, Col 11 Lines 48-64, and Figs 1, 4, and 5). Tsuboi also teaches the use of removing data from the blocks in order to maintain a target data quantity and reduce error (Col 10 Line 67, Col 11 Lines 1-3, Col 12 Lines 1-10). Tsuboi teaches the canceling of data beyond a target data quantity in order to store video data on a record medium such as a magnetic tape (Col 1 Lines 13-22, Col 2 Lines 65-67, Col 3 Lines 1-22, Col 10 Line 67, Col 11 Lines 1-5). It would be obvious to one skilled in the art at the time of the invention to combine the transcoder of Chen with the fixed length block encoding/decoding method of Tsuboi in order to provide a transcoder that would

take a DV stream from a medium that stores information in fixed blocks, such as a magnetic tape.

***Allowable Subject Matter***

Claims 7, 8, 12, and 13 are allowed. Chen teaches the use of the initial equation for the conversion but does not teach the manipulated equation as used in the claims (Col 8).

Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.




Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Rekstad whose telephone number is 703-305-5543. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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